

## 2013A Accepted CINT User Proposals

*3rd-order distributed feedback THz quantum cascade lasers as local oscillators for space applications;*  
Jian-Rong Gao; Delft University of Technology: John Reno

*Oxygen-Vacancy-Enhanced Multiferrocity in Nanoscale Oxide Thin Films;* Hao Yang; Soochow University:  
Yongqiang Wang

*Microbridges for High current density measurements;* Boris Maiorov; Los Alamos National Laboratory:  
Doug Pete

*The Nanomechanical Response of Cu/Nb Nanolamellar Composites Fabricated via Accumulative Roll  
Bonding;* John Carpenter; Los Alamos National Laboratory: Nate Mara

*Fundamental Growth and Interface Studies of Epitaxial Boron Nitride;* Nina Weisse-Bernstein; Los Alamos  
National Laboratory: John Nogan

*Embedded Plasmonic Nanostructures at Semiconductor Interfaces for Enhanced Photovoltaic Efficiency;*  
Nina Weisse-Bernstein; Los Alamos National Laboratory: John Nogan

*Vortex Physics in Superconductors;* Leonardo Civale; Los Alamos National Laboratory: Quanxi Jia

*Electron Dynamics in Low-Dimensional Systems;* Eric Shaner; Sandia National Laboratories: Tom Harris

*Mid-infrared Metamaterials and Plasmonics;* Eric Shaner; Sandia National Laboratories: John Nogan

*Copy of Fabrication, chemical functionalization, and doping of Chemical Vapor Deposition-grown large  
area graphene for electronic applications;* Eric Shaner; Sandia National Laboratories: John Nogan

*Integration of On-Chip Single Ion Detectors for Single Donor Based Qubits;* Edward Bielejec; Sandia  
National Laboratories: Mike Lilly

*Growth and fabrication of multiferroic BiFeO<sub>3</sub> samples for high resolution soft x-ray imaging of magnetic  
domains;* Richard Sandberg; Los Alamos National Laboratory: John Nogan

*Patterning to Produce Arrays of Au(111) Nanoelectrode Sites;* Kevin Zavadil; Sandia National  
Laboratories: John Nogan

*Nanofabrication of GaN Electronic and Optoelectronic Devices;* Arthur Fischer; Sandia National  
Laboratories: John Nogan

*Measuring dopant efficiency in p-n heterostructured nanowires;* Daniel Perea; Pacific Northwest National  
Laboratory: Jinkyong Yoo

*Terahertz QWIP/LED;* Qing Hu; Massachusetts Institute of Technology: John Reno

*IN SITU MECHANICAL TESTING OF METALLIC AND SEMICONDUCTING NANOWIRES USING THE CINT DISCOVERY PLATFORM; Daniel Gianola; University of Pennsylvania: Tom Harris*

*Terahertz Quantum Cascade Lasers for Atmospheric and Planetary Spectroscopy; Albert Betz; University of Colorado Boulder: John Reno*

*MBE growth of mid-infrared quantum cascade lasers utilizing Carbon-doped GaAs/AlGaAs nanostructures; Oana Malis; Purdue University: John Reno*

*Nanowire Specialty Diodes for Integrated Applications; Stephen Goodnick; Arizona State University: Jinkyoungh Yoo*

*Measuring Quantum Tunnel Barrier Height in Silicones; R. Adam Bilodeau; Brigham Young University: Nate Mara*

*Nanocrystalline Metals: Towards Radiation Tolerance; Taheri Mitra; Drexel University: Jon Kevin Baldwin*

*Using growth of patterned thin films to understand residual stress evolution; Eric Chason; Brown University: Tom Harris*

*Fabrication and Electrical Characterization of Topological Insulator Nanowire Devices for Nanoelectronics and Spintronics; Shixiong Zhang; Indiana University: Jinkyoungh Yoo*

*Mechanical Performance of Complex Three Component Nano-Laminate Thin Films; Dave Bahr; Purdue University: Jon Kevin Baldwin*

*Monolithically Integrated Optoelectronic Circuits for Novel Ultrafast Injection-Locked Transmitters with Modulated Photon Lifetime; Marek Osinski; The University of New Mexico: John Nogan*

*Nonequilibrium quantum transport in periodically modulated GaAs/AlGaAs quantum wells; Michael Zudov; University of Minnesota: John Reno*

*III-V Nanopillar for high efficiency single photon emitters; Diana Huffaker; University of California, Los Angeles: Jinkyoungh Yoo*

*Understanding Oxygen Dopant Site in ZnTe Lattice for Enhanced Intermediate Band Solar Cell Performance; Li Zhou; Toyota Technical Center: Yongqiang Wang*

*Graphene modified biocatalytic anode for enhanced electron transfer in enzymatic power sources; Vojtech Svoboda; Binergy Scientific: Jinkyoungh Yoo*

*Photoluminescence properties and temporal dynamics of the excitons in suspended; Laurent Cognet; Institut d'Optique/ University of Bordeaux/ CNRS: Stephen Doorn*

*Scattering mechanisms in optoelectronic intersubband devices; Hermann Detz; Vienna University of Technology: Rohit Prasankumar*

*Novel Photophysics and Devices Engineering for Third Generation Photovoltaics Using Colloidal Nanocrystals; Weonkyu Koh; Los Alamos National Laboratory: Darrick Williams*

*Development of 1-D Nanochannels Based on Soft Materials; Juan Duque; Los Alamos National Laboratory: Stephen Doorn*

*Resonance energy transfer in a MoS<sub>2</sub>-graphene layered material; Kirill Velizhanin; Los Alamos National Laboratory: Anatoly Efimov*

*Resonant near-field coupling of metallic nanoparticles to plasmons in graphene; Kirill Velizhanin; Los Alamos National Laboratory: Anatoly Efimov*

*Controlled Permittivity Films and Nanoparticles for Perfect Absorbers and Hyperbolic Absorbers; Paul Clem; Sandia National Laboratories: Willie Luk*

*Measurement of optical temporal jitter in superconducting nanowire single photon detectors; Richard Sandberg; Los Alamos National Laboratory: Han Htoon*

*Investigating Interface Electronic States in Bi-Layer Carbon Nanotube Thin Films; Jared Crochet; Los Alamos National Laboratory: Stephen Doorn*

*Ultrafast studies of superconducting materials for single photon detectors; Sae Woo Nam; National Institute of Standards and Technology: Hou-Tong Chen*

*FTIR ellipsometry of materials for nanoelectronics; Stefan Zollner; New Mexico State University: Igal Brener*

*Studies of Excitons and Phonons in Single- and Double-Wall Carbon Nanotubes Using Resonance Raman Scattering; Junichiro Kono; Rice University: Stephen Doorn*

*Continuation of Ultrafast Cooperative Dynamics and Emissive Properties of Semiconductor Quantum Dot Networks (Aerogels); Stephanie Brock; Wayne State University: Han Htoon*

*Development of non-metallic Fano-resonant infrared metamaterials with exceptionally high quality factors; Gennady Shvets; The University of Texas at Austin: Igal Brener*

*Topological Nano-Thermoelectrics: Enhancing Thermoelectric Properties of Tellurides through Nanostructuring; Shixiong Zhang; Indiana University: Han Htoon*

*Physics of Interactions of Macromolecules and Ion Complexes on the Patterned Scaffolds and in the Crowded Environments; Slava V. Rotkin; Lehigh University: Stephen Doorn*

*Quantum Dot Mode-Locked Laser; Luke Lester; The University of New Mexico: Igal Brener*

*Non-Linear Response of Superconducting Terahertz Metamaterials; Keith Nelson; Massachusetts Institute of Technology: Hou-Tong Chen*

*Controlling spontaneous emission with metal-dielectric multilayer metamaterial nanostructures; Xiaodong Yang; Missouri University of Science and Technology: Willie Luk*

*Probing exciton dynamics in two-dimensional atomic crystals with ultrafast laser spectroscopy; Kirill Bolotin; Vanderbilt University: Anatoly Efimov*

*Characterization of Dysprosium-Containing Nanosensors for Use in Forensic Neutron Detectors; Marek Osinski; The University of New Mexico: Igal Brener*

*Chirality Controlled synthesis of (5,5) Single walled carbon nanotubes by cap controlling; Chongwu Zhou; University of Southern California: Stephen Doorn*

*Fabrication of MoS<sub>2</sub> gated device nanostructures for investigation of band gap variation with applied electric field; Elias Towe; Carnegie Mellon University: Igal Brener*

*Temperature and Excitation Wavelength Dependence of Photoluminescence Blinking in Giant Nanocrystals; Anton Malko; University of Texas at Dallas: Han Htoon*

*Predictive design and synthesis of peptidic-based nanoassemblies; Charlie Strauss; Los Alamos National Laboratory: Jen Martinez*

*TOWARD DEVELOPMENT OF A UNIQUELY SPECIFIC AND SENSITIVE DETECTION TECHNOLOGY; Antoinette Lillo; Los Alamos National Laboratory: Jen Martinez*

*Advanced functional biomimetic soft/composite responsive nanoparticles; Eric Carnes; Sandia National Laboratories: Wally Paxton*

*A Magnetic Quantum Dot-Microtubule Nanofactory; Jessica Winter; Ohio State University: George Bachand*

*Catalytically-Enhanced Diffusion of Enzymes Monitored by Single Particle Tracking and Their Force Measurement; Ayusmen Sen; Pennsylvania State University: Wally Paxton*

*Investigating Telomere Structure with Correlated Atomic Force and Fluorescence Microscopy; Edwin Goodwin; KromaTiD Inc.: Peter Goodwin*

*Non-blinking Quantum Dots for multi-color and 3D Single Particle Tracking; Diane Lidke; University of New Mexico: Jim Werner*

*High Throughput Super Resolution Plasmonic 3D Imaging in Real Time; Richard Van Duyne; Northwestern University: Wally Paxton*

*Micro- and Nano-domain Modulation of Fungal Pathogen Interaction with Human Dendritic Cells; Aaron Neumann; The University of New Mexico: George Bachand*

*Integration of Bacteriorhodopsin into Ion Transport Membranes for Novel Electrical Energy Storage; Erik Spoerke; Sandia National Laboratories: George Bachand*

*Directed assembly of carbon nanotubes into supramolecular and heterogeneous structures; Ron Salesky; The University of New Mexico: Jen Martinez*

*Nanoheterogeneity in Sensors and Organized Media; James Demas; University of Virginia: Jim Werner*

*Quantum transport through graphene based devices; Holger Fehske; Institut für Physik: Ernst-Moritz-Arndt-Universität Greifswald: Stuart Trugman*

*Nanoparticle interactions and assembly at polymer interfaces; Guido Raos; Politecnico di Milano: Amalie Frischknecht*

*Electronic, magnetic, and optical properties in superconductor-based interfaces; Elbert Chia; Nanyang Technological University: Jian-Xin Zhu*

*Biomimetic Membranes for Ion Transport; Susan Rempe; Sandia National Laboratories: Mark Stevens*

*Molecular Structure of Ionic Liquids at Electrified Interfaces; David Wheeler; Sandia National Laboratories: Gary Grest*

*Ligand conformation in self-assembled nanoparticle arrays; Xiao-Min Lin; Argonne National Laboratory: Gary Grest*

*The elasticity of charged, flexible polymers; Omar Saleh; University of California, Santa Barbara: Mark Stevens*

*Understanding Nano-Scale Aggregates in Precise Ionomers from Simulation & Experiment; Karen Winey; University of Pennsylvania: Amalie Frischknecht*

*Design and Engineering of Optical Nano-Materials on Organic Branched Nanostructures; Vladimir Chernyak; Wayne State University: Sergei Tretiak*

*Excitation Energy- and Charge Transfer in Organic Semiconductors: Combining High-Level Quantum Chemical Approaches with Nonadiabatic Dynamics; Hans Lischka; Texas Tech University: Sergei Tretiak*

*Dynamics of energy transfer in photosynthetic assemblies; Cynthia Lo; Washington University at St. Louis: Sergei Tretiak*

*Effects of Nanoscale Aggregates on Dynamics in Ionomer Melts; James Runt; Pennsylvania State University: Amalie Frischknecht*

*Copy of Copy of Electronic Structure and Defect Modeling of III-V(Sb) Superlattices with hybrid DFT; Sanjay Krishna; The University of New Mexico: Normand Modine*

*Viscoelastic Response of Polymer Nanocomposites; Sanat Kumar; Columbia University: Gary Grest*

*Theoretical search of new topological states in iron-based nanostructures; Chin Sen Ting; University of Houston: Jian-Xin Zhu*

*Towards a reduction in carrier recombination in SnS solar cells; Brad Malone; Harvard University: Normand Modine*

*Understanding Mechanical Grain Coarsening in Nanocrystalline Metals; Brad Boyce; Sandia National Laboratories: Doug Pete*

*In-situ TEM studies of LiMn<sub>2</sub>O<sub>4</sub> stability; Nancy Missert; Sandia National Laboratories: Tom Harris*

*Optimizing nanoscale thin film structure for the determination of SEI chemistry in Si-anode energy storage materials; James Browning; Oak Ridge National Laboratory: Jon Kevin Baldwin*

*Nanotemplate structures fabricated based on vertical aligned nanocomposite thin films; Haiyan Wang; Texas A&M University: Quanxi Jia*

*In Situ TEM Experiments of Electrochemical Lithiation and Delithiation Cycles of 1-D Si-C Nanomaterials; Gleb Yushin; Georgia Institute of Technology: Tom Harris*

*In situ probing of ion-beam irradiated Fe alloys; Claire Chisholm; University of California, Berkeley: Nate Mara*

*Stress-Induced Effects on the Optical Response of Doped ZnO Thin Films; Don Lucca; Oklahoma State University: Quanxi Jia*

*Radiation Damage Tolerance in Interface-Containing Metallic Nanostructures; Julia Greer; California Institute of Technology: Nate Mara*

*Microstructural Investigation of NiTiHf-based alloys; Haluk Karaca; University of Kentucky: Doug Pete*

*In situ TEM Studies on Metal Wires; Matthew Janish; University of Connecticut: Katie Jungjohann*

*The Junctionless Nano-wire Transistor; Roderick Devine; Think Strategically, LLC: John Nogan*

*Use of Nanopores to separate proteins from whole blood; Spencer Farr; Vista Therapeutics: John Nogan*

*Properties of BN Nanostructures Synthesized under Effect of Concentrated Light Heating; Lina Sartinska; Frantsevich Institute for Problems of Materials Science: Anatoly Efimov*

*Synthesis and Carrier Multiplication Studies of Indium Antimonide Nanocrystals; Jeff Pietryga; Los Alamos National Laboratory: Sergei Ivanov*

*Facile Synthesis of Palladium Nanoparticles for Catalysis; Abhaya Datye; The University of New Mexico: Sergei Ivanov*

*Nanoparticle Mass Spectrometry of Giant Quantum Dots; Scott Anderson; University of Utah: Jennifer Hollingsworth*

*A Viral Based Toolbox for the Assembly of Novel Bionanomaterials; Csaba Kiss; Los Alamos National Laboratory: Jim Werner*

*Time-resolved Spectroscopy and Scanning-Probe/Electron Microscopy Imaging of Cooperative Binary Ionic Nanomaterials and Nanocomposites; John Shelnett; The University of New Mexico: Gabe Montano*

*Single Molecule Spectroscopy and Microscopy of Semiconductor Quantum Dot Clusters; Alan Van Orden; Colorado State University: Peter Goodwin*

*Superparamagnetic Nanoparticles for Biomagnetic Imaging; Steve Miller; Senior Scientific: Dale Huber*

*Characterization of Nanoporous Silica Films; Hash Pakbaz; SBA Materials: Andrew Dattelbaum*